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ABSTRACT

Three articles are bound by two assumptions: (1) mass media can play a key role in nutrition education in developing nations, and (2) the full potential of mass media nutrition education programs will not be realized until project evaluation becomes more rigorous. Mark Rasmuson traces the evolution of mass media in nutrition education and describes three widely used media approaches. Joanne Leslie links the elements of a successful nutrition education project to the elements of a well conducted evaluation. In a second article, she reviews five nutrition projects and their evaluations. Also included in this bulletin is an account of a development project for educational radio which failed. (Author/STS)

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THE NUTRITION MESSAGE & THE MASS MEDIA

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THE NUTRITION MESSAGE & THE MASS MEDIA

The three articles that follow are bound by two assumptions: that the mass media can play a key role in nutrition education and that their full potential will not be realized until project evaluation becomes more rigorous and more finely tuned to the part played by the media in development projects.

Mark Rasmuson traces the evolution of the use of mass media in nutrition-education programs. He describes three widely used media approaches, pinpointing their peculiar strengths and weaknesses. Joanne Leslie picks up where Rasmuson leaves off: she identifies the elements of a successful nutrition project and links them to the elements of a well-conducted evaluation. In a second article, she reviews five nutrition projects and their evaluations.

Together these articles constitute a solid exposition of the problems and the promise of mass-mediated education in the service of sector-specific goals. While the focus is on nutrition, the wider implications of the discussions are those that preoccupy all development and communication workers.

Three Media Strategies Used in Nutrition Education

Ninety-two percent of all health education programs in developing countries rely on face-to-face instruction, the American Public Health Association recently reported after conducting a worldwide survey of health and nutrition projects. Moreover, a majority — 59 percent — make some use of communication media. Few of these programs have been evaluated, and even fewer evaluated properly. Still, existing evidence reveals the limitations of face-to-face teaching, and suggests the contributions that communication media can make, whether used alone or combined with face-to-face methods.

Even the staunchest media-advocates recognize the value of face-to-face communication. But educational efforts based on personal encounters have intractable limitations. The most skilled and tireless of educators and facilitators cannot reach as many people with a particular message as can a billboard, to say nothing of a radio station. Quite simply, limited outreach means limited potential impact.

As the spread of mass communication media in developing countries made alternatives to face-to-face education possible, some nutrition-education experts embraced the mass media as teacher substitutes. The most common of the approaches in which interpersonal encounters play only a nominal role — approaches adopted on a wide scale in the early 1970's — have used several media at once.

(Continued on page 2)

Evaluating Nutrition-Education Projects — Getting the Message and Acting on It

The effectiveness of all mass media health-education projects should be evaluated in terms of four kinds of results: (1) outreach; (2) changes in knowledge and attitudes; (3) changes in behavior; and (4) changes in health status.* Most evaluations measure outreach, but changes in knowledge, attitude, and behavior are considered in only about half of all evaluations; and changes in health status are rarely measured. This state of affairs can be explained easily enough: while outreach can be measured after the fact, changes in knowledge, dietary behavior, and health status can only be assessed if baseline information has been gathered; and most mass media nutrition-education projects fail to incorporate an adequate research component.

Outreach, more familiar to advertisers and communicators than to educators since it is not a factor in interpersonal education, can be measured both in terms of its potential size and its actual size. For example, potential size can be measured by finding out how many people subscribe to a newspaper that carries educational messages or determining how many radio-owners live in the catchment area of a radio station that airs educational messages. In contrast, a more precise measure is an awareness survey in which a random sample is interviewed to determine what fraction of the potential audience remembers having seen or heard a particular educational message. A measure such as an awareness survey helps evaluators determine the per person costs of an educational effort.

Formal or institutionalized education has usually been evaluated by measuring changes in knowledge — a method many researchers consider a sufficient gauge of effectiveness. More recently, measuring changes in the affective domain (such as attitude changes) has also become a part of some educational research efforts. However, most educators, particularly those involved in nonformal adult education, believe that the educational message will affect behavior in a way that benefits the individual or the community.

Evaluation of behavioral changes is particularly important to those who fund educational efforts. Often the funds for nutrition education come out of health or agricultural budgets, rather than out of the education budget. In such cases, numerous schemes for improving nutritional status or agricultural productivity compete for available funds, and those who apportion funds want to know as precisely as possible what their money will buy.

In some nutrition-education projects, behavioral changes can be measured directly. For example, the number of new

(Continued on page 3)

**For an analysis of costs, another critical component of any full evaluation, see "The Cost of Instructional Radio and Television for Developing Countries" by Dean Jamison with Steven Klees, AID Studies in Educational Technology, Academy for Educational Development.*

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Three Strategies (Continued)

The Multi-Media Approach

Under the multi-media approach, messages are usually broadcast by radio and reinforced by similar messages carried in the press, on posters and billboards, and through such traditional channels as minstrel and puppet shows.

A one-year program conducted by CARE in the Republic of Korea in 1970, for example, broadcast nutrition information over radio as songs, jingles, and brief dramas. At the same time, it dispensed calendars, posters, comic books, and food charts to the radio listeners. A follow-up study of the Korean program revealed that approximately 53 percent of those questioned could recall the advice contained in the messages and that about 20 percent could state the specific nutrients in each of the food groups (information stressed in the campaign).

As the use of the mass communication media spread through developing countries, some nutrition-education experts embraced the media as teacher substitutes.

Another mass media campaign sponsored by CARE, this one in India in 1972, used radio, newspaper advertisements, posters, comic books, wall paintings, mime shows, and other media to carry both positive and negative messages on the nutritional requirements of pregnant women, on weaning practices, and on general nutrition. CARE reported increases of 32 percent (from 58 to 90 percent) in public awareness with respect to messages related to pregnancy. The percentage of those knowledgeable about weaning practices rose from 59 to 93 percent, and awareness of general nutritional matters rose from 72 to 96 percent during the ten-week campaign.

The results of studies such as the ones just mentioned are, of course, open to question. In particular, objections have often been raised regarding the lack of methodological rigor with which evaluations are conducted. In the Korean Project, for example, the true impact of the campaign could not be known, since no baseline survey of the audience's knowledge was conducted. Another objection involves the lack of research on the length of time that new knowledge was retained after the campaign's end. An even more basic limitation of the evaluations of both the CARE projects was their failure to move beyond the measurement of knowledge acquisition and into the measurement of changes in food-related behavior.

The true impact of a campaign cannot be gauged unless a baseline survey of the audience's knowledge is conducted.

The Advertising Approach

Explicit changes in behavior *are* the object of the newest and most widely touted of the media-alone methods — the advertising or social marketing approach, which utilizes techniques of commercial-marketing communications to promulgate nutrition messages. As used in developing countries, the advertising approach has relied primarily upon the motivating power of broadcast media (usually radio) to carry short specific messages that are frequently repeated over long periods.

Of key importance in the advertising approach is the development and pretesting of messages. This emphasis reflects an increasing recognition that food habits probably cannot be changed by simply teaching nutrition as nutrition, by merely presenting the basic facts of the science of nutrition. As proponents of the advertising approach are quick to point out, such changes have usually resulted from non-nutritional motivation, such as the desire for higher economic or social status. The CARE-India study just cited implied that arousing some fear (by saying, for instance, that "Your children's future is in danger unless from the age of six months you feed them solid food) may induce change more effectively than positive persuasive messages can. Nutrition educators are thus increasingly being advised to formulate themes and messages that identify economic and other benefits to the potential adopters and that play on universal human needs, such as survival and relief from suffering.

"Selling" nutrition is not as simple as selling soap.

An early large-scale test of the advertising approach in nutrition education was conducted in two regions of Ecuador in 1974. Evaluators found that the target audience significantly increased its use of iodized salt. The audience also adopted new attitudes toward protein-energy malnutrition, premature departure from breastfeeding, unsanitary drinking water, diarrhea and other intestinal problems, and parasites; and it put into practice new techniques for avoiding these menaces.

More recently, attitudinal and behavioral changes following an advertising project conducted in the Philippines have been reported. The percentages of mothers who thought that adding oil, fish, or vegetables to infant porridge benefitted the child were reported to have increased substantially. The percentage of those who came to value oil rose from 15 to 74 percent, while the portion who understood the nutritional importance of fish and vegetables rose from about 50 to about 80 percent (from baseline to post-test surveys). The percentages of mothers actually adding these supplements to infant food were reported to have increased from 0 to 24 percent (oil), 17 to 27 percent (fish), and 5 to 15 percent (vegetables).

Experience from these projects has revealed that "selling" nutrition is not as simple as selling soap. Nutritional campaigns attempt to change basic behavior, not merely to influence preferences. They must thus be created with culture-specific food imagery and beliefs in mind. Indeed, within a single country, wide differences in opinion, language, culture, and religion may hamper effective mass communication.

Nutrition messages should be few in number, easy to understand, and repeated frequently.

Like commercial advertising, however, nutrition advertising should utilize economic and social incentives to induce change. As they are in commercial advertising, nutrition messages should be few in number, easily understood, and repeated frequently over the media used by the target population.

Combined Approaches

Just as the discovery of the central weakness of the face-to-face approach (limited outreach and impact) has prompted nutrition educators to experiment with the media, the discovery of the central weakness of the media-alone approach (lack of reinforcement) has created interest in combining the two earlier approaches.

In Project Poshak, several media were used to support interpersonal instruction. Carried out in more than 500 villages in Madhya Pradesh in India, this nutrition-education project employed three types of communication: mass media, face-to-face instruction (supported by flipcharts and child-growth charts), and a nutrition rehabilitation program (conducted at rural health centers for severely malnourished children).

At the conclusion of the Poshak program, the behavior and attitudes of the participants and, in some cases, of the entire community were examined for changes inspired by the project. Among the changes ascribed to the program were (1) an increase in awareness among →

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mothers and medical personnel of the need for giving young infants solid foods, and (2) increases of attentiveness among participating parents of rehabilitated children to the food needs of their young. The coordinated use of interpersonal and mediated instruction made measuring the relative efficacy of each mode impossible. Nonetheless, reinforcement through repetition appeared to reduce discrepancies between messages, and to provide a smooth flow of information to the intended audience.

Other programs based on hybrid approaches have employed the radio forum, whereby broadcasts to organized listening groups are followed by discussions of the new ideas and the formulation of plans to implement them. The most notable example of the radio forum is probably Tanzania's "Food Is Life" campaign launched by the government in 1975. Planned as a sequel to a similar campaign on health practices carried out in 1973, the program was designed (1) to raise the public's level of knowledge about the nutritional value of foods and about ways to obtain a balanced diet on a limited budget, (2) to eliminate food taboos and unhealthy food habits, (3) to promote the use of sound farming methods to increase food production, and (4) to foster cooperation in solving communal problems.

Preliminary reports on the Tanzanian effort show that consciousness of the need for stepped-up food production has increased, that more people now have vegetable gardens and poultry of their own, that dietary habits have improved, that day-care centers for infants have been created, and that certain traditional taboos have lost their grip. *(Compare Joanne Leslies' article on page 4.)*

Conclusion

The approaches to nutrition education surveyed above constitute a powerful set of tools for future efforts. However, the relative utility of each approach, and the situations to which each applies, cannot be determined with precision at present.

Methods of evaluating both effectiveness and cost must be developed and applied to projects exemplifying various approaches. In this effort, a greater degree of methodological rigor is called for than has been evident in past evaluations. Only when this is done will it be possible to pass judgment on the range of approaches to nutrition education that have emerged in recent years.

■ *Mark Rasmuson is presently doing research at the East-West Center in Hawaii, where he has received a degree-study award. The research on nutrition education from which his article is drawn was supported by the Office of Education and Human Resources and the Office of Nutrition of the Technical Assistance Bureau of the U.S. Agency for International Development. Further information on this research can be obtained from Dr. Anthony Meyer at TAB/EHR/AID.*

Evaluating (Continued)

wells dug or new vegetable gardens planted can be counted fairly easily, and increases in purchases of a certain food or in the number of sacks of wheat ground at a mill are simple enough to calculate. Most nutrition-education projects, however, aim at altering domestic feeding behavior. But, since weighing and recording one person's intake for one day — to say nothing of a family's consumption for a month — is an expensive and time-consuming task, nutrition researchers tend to rely on indirect measures of dietary behavior. Typically, they use the recall of food consumed over the previous 24-hour period.

Although sanctioned by widespread use, the 24-hour food-recall method produces unreliable data. Both the conscious understatement or exaggeration of food consumption and incomplete recall undermine the validity and usefulness of this method. However, as the authors of the USAID field guide for evaluation of nutrition education point out in their defense of the 24-hour food-recall method, researchers who try to measure food intake directly often alter the normal dietary behavior of the people under study.

The methodological problems associated with measuring dietary behavior await solutions that may be long in coming. However, evaluations of nutrition-education projects could be strengthened were they to rely less heavily on a single outcome.

Specifically, inferences about changes in food consumption drawn from 24-hour food-recall data should be corroborated by records of changes in health status wherever possible. Morbidity and mortality statistics are appropriate indicators of health status at the community, regional, or national levels. Changes in individual health status can be determined by anthropometric measurements (height and weight) as well as by personal disease histories.

A mass media nutrition-education project can most convincingly be claimed to be effective if it can be shown that:

(1) As a result of a nutrition education message disseminated by the media, people increase their knowledge of or change their attitude toward one or more foods;

(2) As a result of this change in attitude or knowledge, the target audience purchases or produces more or less of this food;

(3) As a result of this change in availability, families or individuals consume more or less of the food; and

(4) As a result of this increased or decreased consumption, the nutritional status of individuals or the community improves. *(See page 4.)*

■ *Joanne Leslie, a graduate student in the Johns Hopkins University Department of International Health, works for EDUTEL Communications and Development, Inc. The research on which these articles were based is written up in a longer report that is available from the author.*

Nutrition Planning Information Service

Community Systems Foundation has announced the formation of the Nutrition Planning Information Service. This information service is a systematic attempt to disseminate new developments in the field of nutrition planning to researchers and practitioners worldwide.

A quarterly journal, Nutrition Planning will supply two resources to readers: abstracts of recent studies, and access to full-text copies of all studies abstracted. Unlike most abstracting publications, which depend exclusively on previously published materials, Nutrition Planning actively solicits unpublished "ephemeral literature" which suggests promising research or implementation strategies, but may not yet be in final form. The aim is to cut lag time between discovery and dissemination.

Materials drawn from more than 50 countries will be selected by editor Barton R. Burkhalter, nutrition planner with experience in the U.S., Latin America and the Far East. He will be assisted by an Editorial Advisory Board of 20 senior members of the field. Start-up costs are borne by a grant from the Office of Nutrition, Agency for International Development.

Those who would like to become affiliated with the Nutrition Planning Information Service by contributing documents, and those who would like to receive a complimentary copy of the first issue of Nutrition Planning (scheduled for publication in October, 1977) may contact Dr. Burkhalter at Community Systems Foundation, 1130 Hill Street, Ann Arbor, Michigan 48104. ■ *This notice originally appeared in* TAICH News, *a publication of the Technical Assistance Information Clearing House in New York.*

Five Nutrition Projects That Use Mass Media

Several recent international conferences have considered the role of mass media in health and nutrition education. The Interagency Meeting on Applied Nutrition Research, which was convened in Rome in October of 1975, identified nutrition education as one of eleven priority research areas. In particular, delegates to that meeting discussed the need to develop methodologies for the use of mass communication media.

However, before further research is conducted, what has already been learned about mediated health education should be synthesized. As a preliminary step in that direction, this article reports on the evaluations of five community-education projects, each of which uses the media to teach nutrition in low-income countries.

The Trinidad and Tobago Breastfeeding Campaign

In June 1974, the Housewives Association of Trinidad and Tobago (HATT) launched a mass media campaign to encourage breastfeeding. HATT received assistance from the Association of Advertising Agencies of Trinidad and Tobago (AAA), two broadcasting stations, three daily newspapers, and one weekly newspaper.

The campaign objectives were to increase the whole population's awareness of the desirability of human milk as an infant food and to provide prospective mothers with accurate information on which to base their decision whether to breastfeed.

According to a brief prepared by the HATT for the AAA, recent surveys have shown that the percentage of Caribbean women who breastfeed has declined since 1975 and that a high level of gastroenteritis and an increasing incidence of protein-energy malnutrition may be attributable to this decline in breastfeeding. Thus, if the campaign were to be successful in reversing this trend, some decrease in gastroenteritis and protein-energy malnutrition could be expected. Unfortunately, however, the description of this project delivered at the Caribbean Food and Nutrition Institute's technical group meeting on "Nutrition and the Mass Media" did not include information on changes in the incidence of these diseases.

The primary media used in the six-week campaign were radio, newspapers, and posters. The total radio time on the two stations amounted to about two hours, with each spot lasting 15 or 20 seconds. Five newspaper advertisements were published a total of 18 times by the four newspapers. Television support was also enlisted, and some interpersonal education took place at health clinics, secondary schools, PTA's, and church groups.

Miguel Gueri, medical nutritionist at CFNI, evaluated the campaign. As a sample for the evaluation, he chose women who had normal deliveries at the Port-of-Spain General Hospital during the six weeks immediately following the end of the campaign. The evaluators interviewed 418 mothers during the first 48 hours after the women delivered and 348 of these women were interviewed again four months later. The team measured changes in knowledge and behavior against women's reports on how they had fed their older children as babies.

Of the roughly two-thirds of the women interviewed in the hospital who already had at least one child, 88 percent of the mothers had breastfed the previous child, but 44 percent of these breastfeeders discontinued the practice before their infants were four months old. According to Gueri's 1975 report, only 11 women started bottle feeding because they had to work, while 36 percent reported that they gave bottles because they had insufficient mother's milk. During these hospital interviews, 95 percent of the women said that they intended to breastfeed, but only 3 percent believed that breast milk alone would suffice for the first six months.

At the time of the hospital interviews, the mothers were not asked about the mass media campaign. But at the second interview, 85 percent recognized replays of the radio ads. Sixteen percent of the mothers (55 in all) had started working within four months of giving birth, but only 6 percent initiated bottle feeding solely because they started working. Forty-one percent of the mothers had completely discontinued breastfeeding, and of those who were still breastfeeding, 97 percent were supplementing mother's milk with bottle feeding slightly later than those who had lower recognition scores.

Advertising Technique Mass Media Nutrition Education

In this project, radio and posters were used to promote specific nutrition objectives in two Ecuadorian Provinces, Imbabura Province in the highlands and Manabi Province on the coast. The project was designed, implemented, and evaluated by a U.S. marketing agency and was funded by USAID. The Ecuadorian National Institute of Nutrition and the Nutrition Division of the Ecuadorian Ministry of Health chose the target areas and the message subjects.

For the 15-month campaign (February 1974-April 1975), radio was the major medium. This choice was made because almost all parts of the target provinces are reached by two or three stations, and few of the local stations run commercially sponsored projects except at peak hours. Moreover, as information gathered in the course of the project showed, 83 percent of all who lived in Manabi, 95 percent of *mestizos* in Imbabura, and 64 percent of Indians in Imbabura had access to a working radio. (Television, on the other hand, is primarily an urban medium in Ecuador, while newspaper distribution is limited and the literacy level of the target populations is low.)

Prerecorded spots were broadcast ten times a day over most of the area's 30 local radio stations. In Manabi Province, some television and cinema spots were used to reinforce the radio messages. Twenty thousand posters carrying the same message were printed and used in both provinces, but no record of the distribution of the posters was kept.

Five main nutritional problems were addressed in this campaign: protein-energy-malnutrition; unsanitary drinking water; parasites, diarrhea and other intestinal problems; iodine deficiency (only in Imbabura Province); and early cessation in breastfeeding (only in Manabi Province).

The campaign's overall objective was not only to increase the knowledge of the target groups concerning these problems and their solutions, but also to effect specific behavioral changes. An important feature of this campaign — and of subsequent nutrition education campaigns in the Philippines, Nicaragua, and the Dominican Republic by the same firm — is that the messages never motivate the listeners to take actions for which their resources are too limited.

The standard methodology for measuring advertising effectiveness — an awareness, attitude, and behavior tracking study — was used to evaluate the campaign. In all, three surveys were conducted over a 15-month period. In addition, the commercial shipment of iodized salt into Imbabura Province was measured, since the campaign stressed the importance of consuming iodized salt.

The first survey was conducted in February of 1974 before broadcasting began. Subsequent surveys were conducted in November of 1974 and in May of 1975. Typical interviews lasted 15 to 20 minutes and consisted of approximately 70 questions on health and food habits, media habits, and demographics. The evaluation team found that knowledge of legumes as a protein source increased an average of 45 percent among those who were aware of having heard the messages and an average of 25 percent among those who were not. The evaluators contend that the significant increases in knowledge among those who claimed to be unaware of the messages reflect the multiplier effect: those who heard the messages might have passed on the information to friends without necessarily indicating the source.

Before the broadcasts began, only 30 percent of those interviewed in Manabi Province thought that mother's milk was the best food for infants, while 47 percent believed that fresh cow's milk was best, and 16 percent thought that powdered

milk was most desirable. By the time of the third survey, the fraction that thought mother's milk was best had increased to 73 percent among those unaware of the messages.

The effort in Imbabura Province to increase use of iodized salt was evaluated in two ways. Among the *mestizos*, most of whom already used refined salt, an increase from 5 percent (at survey 1) to 98 percent (at survey 3) was reported. Among the Indians, many more of whom initially used coarse salt, an increase of from 17 percent to 68 percent in total use of refined salt and an increase from 5 percent to 54 percent in use of iodized salt was reported. While researchers felt that some of the Indians believed that all refined salt was iodized salt, the reported increase in use of iodized salt in Imbabura Province was confirmed by shipment data from the local salt company.

These changes may have been quite transitory: the frequency of message broadcasting decreased during the second half of the campaign, and this decrease may have accounted for the fact that smaller gains were measured between surveys 2 and 3 than between surveys 1 and 2. However, at a minimum, this campaign seems to have successfully brought about short-term changes in knowledge and behavior.

The SUNAB Project

One of the many responsibilities of the Brazilian Ministry of Agriculture is to provide nutrition education as part of its programs to monitor and manage the flow of food within the country. Within the National Superintendency of Provisioning (SUNAB), the agency concerned with nutrition education, is DEAL (Departmento de Assistencia e Educação Alimentar), which uses mass media (including radio, newspapers, billboards, and leaflets) to educate the public.

DEAL's health objective is to provide people with accurate information on nutrition and to encourage them to consume nutritionally valuable foods. At the same time, the foods emphasized at any given moment are those in relative abundance, and the substitution of nutritionally equivalent foods for scarce foods is encouraged. Thus, the SUNAB project is particularly interesting because its objectives fall between those of health educators and those of commercial advertisers.

Between February of 1974 and February of 1975, SUNAB's nutrition education work in the state of Espirito Santo was one of three projects evaluated by a SUNAB nutritionist working with researchers from a U.S. consulting company under contract to USAID to develop and test a field guide for evaluating nutrition-education projects.

The evaluation of the SUNAB program was combined with the evaluation of another nonformal nutrition-education project in Espirito Santo conducted by another branch of the Ministry of Agriculture, EMBRATER (the office of technical assistance and rural extension services). Although the SUNAB messages are primarily directed toward housewives, the target audience chosen for the combined evaluation consisted of people aged 15 to 25 because that population group held most interest for EMBRATER evaluators. Consequently, the effectiveness of SUNAB's educational efforts may have been understated.

About 300 youths were interviewed three times during the evaluation year. However, both educational programs were under way at the time of the first survey, and no planned or documented changes were made during the year, so the effectiveness of either program cannot be determined by changes in responses from one survey to the next.

The evaluation objectives of SUNAB personnel were limited to determining what fraction of the population knew of SUNAB's radio and newspaper messages, how often these messages were heard or read, and if these messages were considered useful. Changes in dietary behavior and the impact of the campaign on health status were not considered by the evaluators.

At both the first and second surveys, about 26 percent of the youths interviewed reported having heard the radio messages, and about 22 percent claimed to have read newspaper articles. However, during both surveys almost half of those who were aware of the messages reported having heard or read them fewer than two times a month. The only striking difference in responses between the first and second surveys was in the number of people who reported finding the messages useful — 13 percent at the time of the first survey and 73 percent by the second. (This finding is difficult to interpret since it was not clear if the content of the messages had changed between surveys.)

One of the more straightforward ways to measure the effectiveness of SUNAB's efforts would be to see how the sales of a plentiful or scarce food changed after a message concerning use of that food was run, but no such evaluation seems to have been done.

The Tanzanian "Food is Life" Campaign

Tanzania has used radio extensively in its national development program, which consists primarily of single-topic campaigns. The most recent of such campaigns was the "Food is Life" campaign, a nutrition project carried out from June 2 through September 29 in 1975.

The target audience comprised all Tanzanian adults. But since Tanzania's national development has emphasized rural development, rural adults were the main targets. Since many of the study groups grew out of functional literacy classes formed during and after Adult Education Year (1970), the nearly three million participants tended to be primarily new literates and did not represent a cross section of all Tanzanian adults.

Like the previous campaigns, the "Food is Life" campaign was designed to promote community discussion based on information disseminated by radio and print. However, in many regions, lacks of receivers, batteries, or good reception prevented listening groups from hearing the broadcasts.

Evaluation and implementation of the "Food is Life" campaign were primarily the responsibilities of local teachers and evaluators. However, experienced personnel from the Institute of Adult Education in Dar es Salaam did work closely with the local evaluators in the six wards chosen for evaluation.

In June of 1975, pretests were given to the six selected study groups before the campaign officially began. One pretest measured nutrition knowledge, and another was designed to gather information on the eating habits of the families of the study-groups' members. Other baseline information on the number of cases of protein-energy malnutrition was gathered from clinic records. These pretest data showed that food taboos, particularly those relating to sources of and rights to certain foods, were widespread.

While post-test results are still pending publication, qualitative evaluations suggest that as a result of the "Food is Life" campaign, some traditional taboos have been abandoned and that many vegetable gardens and poultry units were established. However, as J.M.M. Matiko notes, had the campaign not overlapped with other campaigns, more behavioral changes could perhaps have been measured.

CARE Mass Media Nutrition Education

From January 1 through December 31 of 1970, CARE (cooperating with the Korean Ministry of Health and funded by a grant from USAID) used radio and print in a nutrition-education program in Korea. The government broadcasting system, KBS, which reaches almost the entire country, agreed to provide time for two 30-second spots every day for the year. The nutrition messages centered around the identification of the five food groups and the need for balanced meals. In particular, the messages stressed the importance of providing sound diets for pregnant and lactating women and of introducing solid food into the diets of nursing infants.

Foods were grouped to identify (and thus to combat) major nutritional deficiencies in Korea. Small bony fish, which are eaten whole, were grouped together with milk products as main sources of calcium. Vegetables and fruits were placed in the

same category because they are eaten in Korea primarily as condiments, and because increased consumption of both was a campaign objective. Oils and butter were listed in a separate group, and an increased consumption of these was considered desirable to increase the population's utilization of Vitamin A. Consumption of a variety of complex carbohydrates in addition to rice was encouraged for both nutritional and economic reasons.

The basic printed material distributed to support the radio announcements was a colorful calendar illustrated with pictorial reminders of the five food groups and of the nutrition slogans. A poster campaign was also launched, but was dropped so its funds could be used to buy other printed materials (including a comic book and a pamphlet for housewives) that appeared to have greater impact. An estimated 75,000 calendars, pamphlets, and comic books were distributed.

During late 1970, the Korean Productivity Center conducted a CARE-sponsored evaluation in which 1,000 people were interviewed. Unfortunately, the evaluation of the radio component of the program, as reported by Margot Higgins and Joel Montague, was limited. The report states that of the persons interviewed, 92 percent of city dwellers and 87 percent of those who live in the provinces had heard the broadcasts or had heard others talk about them. Of these interviewees, 83 percent in the cities and 68 percent in the provinces remembered something of the message, especially of the two themes of "let us eat a balanced diet" and "let us eat minor cereals as well as rice."

Evaluation of the printed material, however, was fairly detailed. Evaluators compared those who received at least one of the printed materials, those who received no materials but who lived in a distribution area, and those who did not live in a distribution area.

The evaluation showed that the comic book achieved the most impressive dissemination. Eighty percent of all those interviewed had seen it or heard talk of it. Fifty-three percent of those interviewed remembered the advice about eating a balanced diet, and 20 percent could name specific nutrients in the five food groups. Higgins and Montague classified those interviewed by educational level and social class. They found that those with little education seemed to remember the nutrition messages even less well than those of a low economic level.

The Researchers' Imperative

The evaluations of these five projects suggest that the mass media can be used to bring about desirable changes in dietary behavior. At the same time, the summaries of these evaluations reveal some of the methodological gaps that nutrition researchers should strive to fill.

■ Joanne Leslie

On File at ERIC

ERIC (Educational Resources Information Center) is a federally funded information system that collects materials on all facets of education. Copies of many of the documents it collects can be purchased from EDRS (ERIC Documents Reproduction Center), either on 4 x 6 inch microfiche (each sheet of film carries up to 98 pages of text) or as a full-size photocopy of the original.

Documents available from EDRS can be ordered from ERIC Document Reproduction Center, P.O. Box 190, Arlington, VA 22210. Order by ED number and enclose payment for the price listed plus postage. For information about ERIC, indexes to ERIC documents, and other services, write ERIC Clearinghouse on Information Resources, School of Education, Syracuse University, Syracuse, NY 13210.

Some recent entries in the ERIC files of special interest to *DCR* readers are listed below:

- Charconnet, Marie-George. *Development of Educational Methods and Techniques Adapted to the Specific Conditions of the Developing Countries. Peer Tutoring: Operational Description of Various Systems and Their Applications.* Paris, France: UNESCO, 1975, 72 pages (ED 136 776).

  Various patterns of peer tutoring are described and a dozen systems are documented (e.g., "Petites Ecoles," "Keller Plan," "Madras System"). It is concluded that peer tutoring is a flexible method, adaptable to different educational situations, every educational level, and highly varied sociocultural environments; it is thought to be a valid solution to certain problems in educational development in developing countries. — Available from EDRS in microfiche only for 83¢ plus postage; photocopy is not available.

- Lourie, S. *Design of a Regional Education Plan.* An illustration: Informal Education in the Highlands of *Guatemala. IIEP Seminar Paper: 15.* Paris, France: UNESCO, 1975, 23 pages (ED 133 860).

  The program described is intended to use informal and formal education to bring literacy to the largely poor and illiterate rural population of the highlands of Guatemala. Included is an analysis of the design stage and organizational structure of the plan, which uses parts of the existing governmental structure. — Available from IIEP Publications, 7-9 rue Eugene-Delacroix, 75016, Paris, France (3.00 francs). Available from EDRS in microfiche only for 83¢ plus postage.

- *Video Tape Recording and Film: Description and Comparison with a View to Their Application in Audio-Visual Programs in Bangladesh.* New York: Asia Foundation, 1975, 48 pages (ED 124 111).

  Advantages, limitations, and liabilities of videotape recording, 8 and 16mm systems are compared with special consideration given to their use in tropical conditions. Discussion includes a comparison of three systems and technical operations, and covers the precautions necessary to insure proper functioning. Cost estimates on equipment, a list of repair facilities in Bangladesh, and information sources on media appear in the appendices. — Available from EDRS in microfiche for 83¢, in photocopy for $2.06, both prices plus postage.

- *Exploring New Directions in Teacher Education. Experiments in the Preparation and Training of Teachers in Asia.* Bangkok, Thailand: Asian Centre of Educational Innovation for Development and UNESCO, 1976, 251 pages (ED 134 547).

  Twenty case studies of experiments carried out in Asian nations in response to local problems in teacher education are organized into three basic subject areas: linking teacher education to national development tasks; linking teacher education to efforts to equalize educational opportunities; and institutional and professional development in teacher education. Nations represented are India, the Philippines, Thailand, Nepal, Iran, Korea, Singapore, Malaysia, and Japan. — Available from UNESCO Regional Office for Education in Asia, Box 1425, Bangkok 11, Thailand ($10.50). This document is not available from EDRS.

■ **Barbara B. Minor, Publications Coordinator, ERIC Clearinghouse on Information Resources**

Portable microfiche readers that can be adapted for 220 current are available for less than $100, while a typical full-size desk-top model costs about $250, and more elaborate models cost over $1,000. Reader-printers, which can be used to produce hard copy, cost about $1,500. For details, contact either Barbara Minor or the Clearinghouse on Development Communication.

Two-Way Radio — One Way To Health

The Appropriate Technology Department of the University of Wisconsin is heading up a project to develop inexpensive two-way radio equipment for use in health care programs.

According to project director Ned Wallace, recent World Health Organization publications have affirmed the importance of two-way communication within rural health programs in developing countries. WHO found that the few regions that have radio networks using Single Sideband High Frequency (HF) equipment have upgraded health services markedly. Its reports show that the use of HF equipment in an efficiently run operation enhances administrative capacity, patient care, teaching and planning.

Two-way radio is the only practical communication medium where telephones are unreliable and where transportation is costly and difficult, says Dr. Wallace. But the high cost of commercial two-way radios impedes the development of regional or national radio networks.

Interested individuals and institutions with experience in the design and field testing of communication equipment and use should contact Dr. Wallace at 610 Walnut Street, Madison, Wisconsin 53706.

Call For Copy

The next issue of *Development Communication Report* will focus on the use of the rural press and print materials in development efforts. The rural or community newspaper as used in literacy programs in Third World countries will receive special attention.

Readers with intimate first-hand knowledge of projects involving the rural press are invited to submit copy and comments to the editor no later than November 10.

Trade Secrets

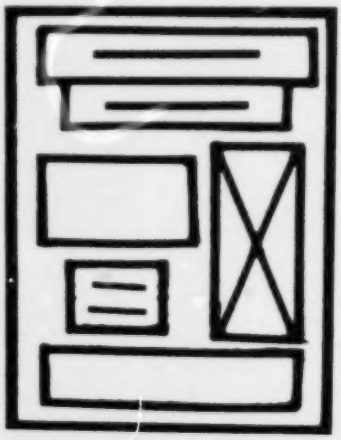
The innovative use of all types of news media — from flannelboards to satellite television programming — is the subject of a project currently being undertaken for the U.S. Agency for International Development by James W. Brown, Professor of Instructional Technology at San Jose State University. The study will emphasize uses of such media in poor rural environments in Latin America.

The project is designed to create a well organized, cross-referenced inventory of case reports, together with an analysis of the principal conclusions to be drawn from them. Individuals and organizations interested in supplying copies of reports suitable for inclusion in the collection or who may wish to obtain a copy of the completed report may write to Dr. Brown at 1678 Sweetbriar Drive, San Jose, California 92125 or call (415) 269-0632.

Cheap & Easy LAYOUT AD TRACING

For those of you who do layouts, here is an easy way to get ideas. Professional layout is expensive and takes time — this is FREE and fast.

Look through magazines and study the ads. When you find one you like, place a sheet of paper over it and trace the blocks you see.



Lindy Layer

You now have a basic layout to use as is or to work from and modify.

- Thanks to all of you who have written regarding the book. It is taking shape and should be finished by the time the next issue of *DCR* comes out. I have been exploring ways to reproduce it cheaply so I can mail it overseas and make sure it receives maximum exposure.
- Correction: in the last issue, the final steps should have read "a or b" — *either* does the trick.

U.P.A. 594 Logan Avenue, Toronto, Ontario, CANADA M4K3B8

Telecommunications Policy Report

The Center for Northern Educational Research at the University of Alaska has published a 26-page report, "ATS-6 and State Telecommunication policy for Rural Alaska: An Analysis of Recommendations," for general distribution.

The report, which focuses on the Alaskan satellite experiments, will interest communication planners working in rural Third World settings, since bush Alaska is faced with many of the same problems developing countries confront and since the Alaskan experiments are generally considered successful.

Thirteen recommendations are presented in the report. Each is followed by a discussion of the technical and social factors that prompted the proposal. (These rationales are heavily informed by the earlier and longer reports listed in the bibliography.) →

Copies of the document may be obtained from James M. Orvik, Associate Professor, Center for Northern Educational Research, University of Alaska, Fairbanks, Alaska 99701.

Battery-Powered Projector

An unusual slide and filmstrip projector was recently exhibited at England's Open University. Battery-run, the 2.6-kilogram projector can be fitted with an attachment that permits it to show microfilm, microfiche, and microscopic slides. Another attachment converts the versatile device into a polarizing projection microscope.

The steel Halight projector costs £ 50. The micro-attachment costs £ 24 and the polarizer, £ 6. For further information, contact W.M. Herten at THD House, Peacehaven, Sussex BN9 8JJ, ENGLAND.

A Communicator's Checklist

1 Richard C. Burke wrote *The Use of Radio in Adult Literacy Education* with the needs of the middle-level literacy worker in mind. His perspective and his advice tend to be practical, oriented toward problem-solving, and informed by his considerable knowledge of literacy projects that use radio. Still, Burke makes no fast distinctions between the concerns of the upper level bureaucrat and those of the grassroots organizer, both of whom stand to profit by a reading of this monograph.

"Why Radio?" (Chapter One) is a terse defense of the use of radio as the mainstay of literacy projects. Assessed in terms of its cost, the size of its audience, listener participation, and "immediacy" (a term whose literal and connotative meanings Burke takes pains to spell out), radio is presented as a bargain. This conclusion is, however, foregone, at least with respect to cost and audience size, since radio is compared primarily to television.

An analysis of the composition and needs of the listening audience follows the assessment of radio. To the literacy worker, says Burke, fall the all-important tasks of identifying and clarifying the audience's basic needs and of making sure that the curriculum addresses those requirements. Along with material, biological, and social needs, other factors — levels of vocabulary and of concept-understanding, the relation of local to national languages, attitudes toward learning in general and toward radiophonic education in particular — need to be considered. But, as Burke stresses, all such impression-based analysis comes to little unless the field worker shares it on a regular basis with the program producers. Then, he claims, it is nothing less than vital.

Three chapters of the handbook are devoted to planning, developing, producing, and distributing radio programs and support materials. Typical of the kinds of questions taken up are how to distribute staff responsibilities; how to balance the use of radio and the use of print; how to decide if existing radio programming can be adopted to local needs; how to mix talks, dialogues, interviews, discussion, and dramatizations in radio programs; and how to set up production facilities keyed to specific budgets. As the author points out, these chapters and these questions will interest more than those whose daily duties are discussed; indeed, to understand the division of labor in a literacy project is to some extent to understand the project's goals and potential problems.

Burke devotes a large part of the remainder of this work to the technical problems of setting up, maintaining, and evaluating a radio-based literacy program. These chapters tend to be lucid and rich in examples. Because they are generalized enough to be of use to development workers more concerned with sectoral projects than with literacy per se, they naturally leave some questions unanswered or half-answered. But their wide sweep gives the reader a feeling of preparedness and an overview that are no doubt worth more than prescriptions.

On balance, it is Burke's stance halfway between the philosophical and the pragmatic and closer to people than to policy that gives his monograph its flavor and its value. An occasional lapse of judgment or error of fact scarcely mar either.

The Use of Radio in Adult Literacy Education can be mail-ordered from the International Institute for Adult Literacy Methods, P.O. Box 1555, Tehran, Iran. It costs U.S. $2.00. ■ **K.C.**

2 The three parts of Lyra Srinivasan's *Perspectives on Nonformal Adult Learning* — analysis, comparison, and evaluation — combine neatly.

Srinivasan's initial overview of the theoretical forces that underpin nonformal education is weighty and yet free of the voice of authority. Without resort to the use of jargon, she manages to present the ideas of Illich, Freire, Rogers, Knowles, Bruner, Skinner and other theoreticians so that they are accessible to the layperson and acceptable to the expert. In the process, something interesting happens: the union of ideas as seemingly incompatible as those of Skinner and those of Illich begins to appear feasible under certain circumstances. To Srinivasan, this marriage of opposites is fruitful, if uneasy — more like the mix of vinegar and oil than that of fire and ice.

The comparative review of the basic approaches to adult learning, which comprises the monograph's long mid-section, rests on an assumption that few nonformal educators contest: that the psychological environment in which learning takes place is as important as the subject matter. The discussion of problem-centered approaches, projective approaches, and so-called "self-actualizing" approaches thus focuses primarily upon teacher/learner relationships and upon the use of learning materials, though other factors are also considered.

The comparisons the author draws are between purebreds and hybrids, between model projects that closely follow one of the three basic approaches and those that combine approaches. Discussed at length are the Thai "Khit-pen" concept, the Turkish Ministry of Education's use of the projective approach, the Apperception-Interaction Method used in the United States, and the self-actualizing approach employed in Philippines Rural Reconstruction Movement. Nonformal education efforts in Ethiopia, Ghana, and Bangladesh are described in less detail.

True to her belief that adults can determine for themselves what is relevant, Srinivasan withholds judgment until she has presented all the material to her readers. Then she reveals her own pedagogical preferences, which reflect her experience as a participant and an observer in nonformal education experiments.

In the last section, the author strikes a happy balance between the personal and the impersonal. With a qualified claim to speak for all in her field, she lists ten assumptions about nonformal education that guide or should guide the work of nonformal education planners and workers.

This paper's only weakness may be its main strength. The aplomb with which Srinivasan generalizes about the field of nonformal adult learning could annoy some readers. But her ideas cannot be dismissed lightly, and the case studies, appendices, and references she includes will probably serve to quell those who put little stake in overviews.

Perspectives on Nonformal Adult Learning, the first in a series of monographs on functional education, can be purchased for $5.00 from World Education, 1414 Sixth Avenue, New York, N.Y. 10010. ■ **K.C.**

3 In *The Participatory Process: Producing Photo-Literature*, authors Bonnie Cain and John Comings make short work of the notion that "camera ready" means "picture perfect." Rather, they take the view that technical excellence matters less than intent, that well-wrought does not necessarily mean well-received. Far from a sanction for a slapdash approach, this manual simply reflects the idea that learners will know how to use what they themselves have made.

Cain and Coming's paper is intended primarily for use by group leaders in-

terested in developing *fotonovelas* in conjunction with community development projects. In addition to the step-by-step description of the production of the *fotonovela*, discussions of the role of the facilitator in materials generation and in the participatory process in general are included.

The technical section of the paper covers plot sketching, layout, shooting schedules, and printing practices. Parallel sets of instructions are offered, one for those with 35 mm. cameras and another for those with non-regulatory cameras (Polaroids, Instamatics, etc.). A checklist for use in evaluating the effectiveness of the finished products and cursory descriptions of options in photo-literature other than the *fotonovela* round out the presentation.

The Participatory Process: Producing Photo-Literature can be obtained for U.S. $2.25 from the Center for International Education, Hills House South, University of Massachusetts, Amherst, Mass. 01003. ■ **K.C.**

4 Murray Culshaw's *Training for Village Renewal*, published by the Community Development Service of the Lutheran World Federation, focuses primarily on the technical training of village youth in rural development projects. Culshaw provides country-specific information for Asia and Africa, along with a short section on suggested background reading and a brief definition of nonformal training. The various sections cover established programs, magazines, and research institutions. Addresses and contacts are provided for training programs listed.

This publication could be a useful resource to anyone designing or setting up a program in Africa or Asia. However, little information is given on projects and programs in Latin America. While no discussion is devoted to the general principles of rural development, this handbook may still be a worthwhile investment for those interested in training in a specific country in Asia or Africa.

Copies of this publication may be obtained from the Lutheran World Federation, Community Development Service, Route de Ferney 150, 1211 Geneva 20, Switzerland. The cost is $2.00. ■ **A.G.**

5 From the record of the Fourth Biennial Afrolit Society Seminar, just published as *Language and Media Supports for Nonformal Adult Basic Education*, one gets the impression that the sessions seldom dragged but may at times have tended toward confusion. While visions of linguistic paradigms were dancing in one conferee's head, the problems of running a rural newspaper may have been preoccupying the next. All kinds of mental sparks no doubt flew. Whether the linguist and the newspaper editor altered each other's perspectives during the crossfire was, of course, the question.

Two years after the conference the question has changed. Now it is more to the point to ask if and how such an eclectic collection of essays can be used. The answer to "if" seems to be "yes." The answer to "how" is not so simple, and it is left up to the reader to answer.

The nine essays that make up the first part of this monograph are bound by assumptions rather than by subject matter. One is, as Afrolit's chairman Charles T. Hein puts it in the introductory essay, that in the classroom "no one can be the authority without depriving the others of the freedom to create." The other, unstated, is that teachers need to know far more (about language) than they can profitably share with learners. By itself neither idea seems particularly new nor objectionable. The question of whether together they constitute a contradiction will probably send the thoughtful reader into fruitful independent study.

The two most theoretical essays in the collection, "The Concept of 'Difficulty' in Post-Literacy Materials" by F. Peter Cotterell and "Measuring Message Comprehension with Cloze and Clozentropy" by Dennis T. Lowry, are by no means the most elusive of the lot. In the first, Dr. Cotterell delves into learning theory and reviews some fascinating experiments designed to reveal the workings of memory. With the reader still in tow, he surfaces on a piece of solid advice for developing easy-to-read materials for the newly literate.

Dr. Lowry's review of recent research in communications also serves practical goals. After differentiating between quality and quantity in message formation, he classifies all methods of measuring message comprehension as content-based, content/audience-based, or content/audience/criterion group-based. Using this division as a basis, he then offers a three-step strategy for measuring message comprehension.

"The Linguistic Aspects of Alphabetization" by Hailu Fulass also tends to be theoretical. Dr. Fulass' contention that "alphabetization is a kind of language planning" and his thesis that "we have to organize our material and intellectual resources for a *search* for innovation," while interesting, will tend to remain abstractions for those unfamiliar with Oromo, Wolamo, and Amharic — the languages from which he draws his examples.

Three provocative essays in this series deal with specific media: Dennis Moyo's "Kisoma Kwa Redio: Learning Related to Literacy by Radio in Tanzania," Per H. Baugsto's "The Rural Press: Its Future and Prospects in Literacy Work," and Annie Wainaina's "Visual Perception of New Readers: Implications for Literacy Follow-up Materials." A description and an evaluation of Tanzania's radio-education program, Mr. Moyo's article rests on the idea that radio broadcasting cannot serve as the sole medium of adult-literacy programs. Mr. Baugsto's essay amounts to the defense of the rural newspaper as a literacy tool and contains three main points: 1) the rural newspaper is often a better stimulus and reinforcing agent than radio is; 2) rural newspapers should not be distributed free of charge and as education material only; and 3) concern for finding appropriate technology ought to inform more literacy campaigns. (An excerpt from Ms. Wainaina's article will appear in a future issue of *DCR*.)

Language and Media Supports for Nonformal Adult Basic Education, Afrolit's Paper No. 2, also contains Dr. Hailu Arayaa's case study of Ethiopia as a country beseiged by the problems of a multilingual society, a workshop report called "A Multi-media Model for Media Supports for Program Development and Teaching Literacy for Better Family Living," reprints of speeches delivered at the conference, and a section on various agencies engaged in multi-media approaches to literacy and nonformal education.

Edited by F. Peter Cotterell, this paper can be obtained from the Afrolit Society, P.O. Box 72511, Nairobi, Kenya. ■ **K.C.**

6 Slow-scan television (SSTV) is a technique for transmitting a television picture slowly through a narrow channel, rather than quickly through a wide channel as conventional TV is transmitted. This method necessarily entails the loss of the motion portion of video, because motion depends on the very rapid (30 times per second) replacement of the image on the screen to give the illusion of continuous motion. But slow-scan television has an important advantage: narrow channels (such as radio or telephone lines) are both cheaper and more readily available than broadband channels.

Ingram's book is primarily directed at the amateur radio operator, or "ham," who is interested in adding slow-scan capability to his station so that he can exchange video "stills" with other hams. It describes the narrowband 128-line system used by radio amateurs, a low-resolution system that takes eight seconds to transmit a single video picture. For that audience, the book is excellent. It begins with a general introduction to the theory and principles behind SSTV, and proceeds into a detailed technical discussion of "homebrew" gear. It also includes descriptions of commercial amateur equipment, and of specific techniques and products. Block and wiring diagrams, as well as lists of other operators and organizations around the world, augment the text.

The author recognizes the potential of the slow-scan technique for possible development applications, but his book →

will be of limited value to those who are interested in such uses. The quality of the image on the 128-line system, especially when the image is transmitted over high frequency radio, is not high enough to consider for health, disaster relief, or other developmental uses. (For purposes of comparison, the U.S. standard system uses 525 lines; other systems use 625 lines or more).

Since the book is intended for amateur radio users, discussion of non-amateur slow-scan gear is omitted entirely. It also omits any significant discussion of transmission by means other than high frequency radio (by, for example, telephone lines). These omissions are unfortunate because the use of SSTV technique is a potentially promising path for incorporating visual inputs into low cost, audio-based developmental educational activities.

These shortcomings aside, Ingram has produced an excellent and useful book for his intended audience of amateur radio operators, and the general reader may still profit from the sections of the book that discuss the theory and principles of slow-scan television. *The Complete Handbook of Slow-Scan TV* can be obtained by writing TAB Books, Blue Ridge Summit, PA 17214. The cost is $9.95 and the publication number is 859. ■ **Dennis Foote, Academy for Educational Development**

7 In *Communication and Change: The Last Ten Years — and the Next*, the changes of the last ten years are explored more fully than communications in the next. Attention to appraisal (as defined by contributor Harold D. Lasswell) outweighs that accorded to planning. To take such a view of the book is not to shortchange the appraisal, most of which is provocative and honest. But neither is it simply to quibble about the appropriateness of the title. After all, the book seems intended primarily for use by communication *planners*. Editors Wilbur Schramm and Daniel Lerner, whose essays are less vulnerable than some in the collection to this criticism, recognize this imbalance. But they don't seem as troubled by it as readers may be.

Accepted for what it is, conference proceedings cast in a form akin to a textbook, this volume does lay the groundwork for a discussion that each day looks more like a controversy. It contains history and research findings, opinion and theory, speculation and testimony. The work of economists, communicators, journalists, sociologists, and others, the book offers both partisan and clinical perspectives on the role of communication in development.

An overview and assessment of development and communication from the mid-sixties to the mid-seventies set down the boundaries of the discussion. Wilbur Schramm recites the accomplishments and the failures of the Decade of Development as a prelude to examining the rise and pitfalls of mass communications. More specifically, he asks if more was not expected of the media than the media by themselves could possibly achieve. Schramm then asks that the "task of communication" be redefined "as part of the broader system of change and growth."

In "Development and Mass Communication — a Re-Examination," Economist Harry T. Oshima finds fault with development models based on the notion that the benefits of an ever expanding GNP will eventually trickle down to the poor, criticizes "big push" and other capital-intensive development strategies, and explains both how and why labor-intensive strategies stand a better chance of working — all this in support of his belief that "the role of mass communication is greatly enhanced in a labor-intensive strategy because more people with less education in remote regions must be reached than in a capital-intensive strategy." In a similar vein, S.N. Eisenstadt identifies the flaws in the classical development paradigms and argues convincingly that the modernization process, far from universal and far from a natural development dictated by human nature, is bound to a certain historical period.

Case studies of four development models make up the second part of the book: the approaches taken by Bangladesh and by Korea are discussed in terms of specific projects (Comilla and the "Mothers" Clubs," respectively) while those of India and China are discussed more broadly. Although each of these profiles is fascinating in itself, the emphasis, tone, and level of generality vary so widely from one essay to the next that instructive comparisons are hard to draw. Still, the portraits do provide a basis for evaluating the transferability of an approach, as long as the reader has a particular cultural context in mind.

(Such failures to address the same problems or to address a problem in the same terms are bound to occur at a conference organized to reassess any issue. Indeed, only differences of perspective lead to the new syntheses such conferences exist to forge. Recognizing this fact, the editors include in this book brief responses by some of the conferees to most of the papers included in the volume. Unfortunately, however, few of these responses supply the vital links between the professional experiences of the two parties involved. Some responses amount to little more than restatements of major points while others raise peripheral issues that are as apt to distract or confuse as to intrigue readers.)

In "The Challenge of Rural Development," the third section of the book, Syed A. Rahim compares the extension and community development approach to rural communication with the (1) ideological and mass mobilization approach and with the (2) mass media and education approach. Basing his comparison on an analysis of kinds of communication channels, messages, and flows, and on the identification of the communication initiators and beneficiaries, Rahim contends that the extension and community development approach works better than the mass media approach in a rural setting. Bryant E. Kearl, on the other hand, describes a gradual shift in communication policies (from those that focus on the vertical transmission of messages to those that promote the freer exchange of information among all groups) only to conclude that no existing communication model meets the requirements of a developing agricultural country.

If a consensus among the contributors to the discussion of research issues in development communication (part four of the book) exists, it is that past research findings need to be systematized before future research priorities can be set. Beyond this, however, Gloria Feliciano calls for the use of qualitative indicators in place of or in addition to numerical yardsticks in communication research even as Everett Rogers claims that a structuralist orientation (toward reliance on network analysis) has put communication research back on its feet. While the two views are not contradictory, the difference in emphasis mirrors problems that tend to divide the field.

An historian of this division, Frederick T. C. Yu, compares the communication researcher to Alice lost in Wonderland. In the closing essay of this section, Yu points to a lack of direction that both reflects and promotes the periodic re-invention of the wheel and the pursuit of academic eccentricities. Rather than make what he calls a "shopping list of ideas or suggestions for future research," he identifies "critical problems, opportunities, and challenges with priority implications." (But the force and depth of Yu's analysis notwithstanding, readers may have put to good use the "shopping list" that never materializes.)

The three papers that comprise "Cultural Contexts" are loosely bound. Dr. Inayatullah's essay, which may have fit better alongside Godwin Chu's discussion of China in section two, discusses the inadequacies of the Western development model and the failure of an Asian model to evolve. His call for a new global model is then taken up by Hidetoshi Kato, who discusses the communication implications of globalism. Kato argues that "if more developed countries can put more emphasis on the export of software techniques of program production rather than on canned programs, then more independent 'local' programs, which serve national development, can be produced."

Charles E. Osgood's essay, the last, decidedly does not pick up where Kato and Inayatullah left off. A lively presentation of a linguistic model developed to probe what Osgood calls "subjective culture," the essay is at once a technical description of "factor-analytic models" for

computer processing "semantic differential data" and an invitation for anthropologists to do more than "compare skull shapes and count potsherds."

The essays of the last section ("Retrospect and Prospect") reflect the strengths and weaknesses of the whole. Like the book itself, Daniel Lerner's essay provides a perceptive assessment of development from mid-century to the present. Also like the book, it sketches the future of communication in development in strokes that are spare and deft but that sometimes leave too much to suggestion. Harold D. Lasswell's brilliant outline of the structural and functional components of development does look forward into the future as well as backwards into the past, but it treats communications only in passing.

The papers by Simon Ramo and George Chaplin come closest to catching the past and future in the same frame. As for the rest, readers have no choice but to accept the lapses with the insights. As Lerner and Schramm say in their postscript, development has "proved more difficult and the necessary strategies of communication more complex" than had once been thought.

Communication and Change: The Last Ten Years — and the Next, an East-West Center book, is available from the University Press of Hawaii, Honolulu, Hawaii 96822. ■ **K.C.**

Half the task of introducing a new idea is to connect the strange with the familiar. These connections — analogies — not only give learners access to new experience but also give their [illegible] experience a new use and val[illegible], of course, is to make the right [illegible]ctions.

Juan Flavier seems to have made the right connections. As a family planner at the International Institute of Rural Reconstruction in the Philippines, Dr. Flavier decided that the best way to share potentially foreign-sounding ideas with the rural population is to discuss them in the language of the farm.

Flavier had found that the terminology he and others had been using in the Philippines to explain family planning was doing as much to block as to promote understanding. Terms such as "fertilization" and "ovary," difficult enough to explain to English-speakers, had no Filipino cognates. To add to the confusion, these words were often incorrectly hispanized. Naturally, adult-learners tended to become defensive when communication broke down, and the cause of family planning suffered as a consequence.

The book *The Agricultural Approach to Family Planning* grew out of Flavier's and the IIRR's attempt to compare family-planning concepts and practices to agricultural concepts and practices and thus to make family planning easier to understand and to relate to rural life. It is a heavily illustrated and step-by-step account of how the agricultural analogy approach developed and of how it was implemented in the province of Cavite. At the same time, it is more than a program write-up and could well serve as a master plan for similar efforts undertaken elsewhere.

More than half the book is devoted to the discussion of the development of comic books and flipcharts, the two media to which rural Filipino farmers seem most receptive. Just as the project itself appears to stress the "why" of family planning as much as the "how," this discussion gives roughly equal play to technical factors and pedagogical concerns. The remainder of the book briefly covers project design and evaluation.

In the record of the Cavite project, the reader will find little with which to take issue: the presentation is methodical (if sometimes digressive and repetitious) and no effort is made to conceal the program's failures. Of the materials developed at IIRR and reproduced in extensive appendices, curriculum specialists with experience in rural settings will be the best judges. Virtually no one can dispute the book's thesis — that there is a right and a wrong way to say anything.

The Agricultural Approach to Family Planning is published by the Communication Foundation for Asia and can be obtained from IIRR, Silang, Cavite, Philippines. ■ **K.C.**

A training manual on audiovisual communication is now available from World Neighbors. Originally developed by Indiana University for use by Peace Corps Volunteers, this handbook has been designed and revised to help educators plan, produce, and use instructional materials in both the classroom and the community. The book's focus is on items that can be produced in the field at low cost: stencils, puppets, pamphlets, flannel boards, etc. Discussions of planning, use, presentation and production, along with numerous examples, make the *Audiovisual Communication Handbook* a useful basic resource.

Copies may be ordered from Overseas Development Materials, World Neighbors International Headquarters, 5116 North Portland Avenue, Oklahoma City, Oklahoma 73112. ■ **A.G.**

Development Communication Report, published quarterly by the Clearinghouse on Development Communication, is distributed free to over 5500 development professionals.

A center for materials and information on important applications of communication technology to development problems, the Clearinghouse is operated by the Academy for Educational Development, a nonprofit planning organization, and supported by the Technical Assistance Bureau of the U.S. Agency for International Development as part of its program in educational technology and development communication.

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Readers are invited to submit typed manuscripts of no more than 1000 words and to send in photographs.

Dilemmas (Continued)

peared that no broadcast time would be provided during the critical hours and that not enough time would be available to make a serious impact. Further, the operations manager admitted that the signal barely covered the capital and its immediate environs, much less the rural areas where the need was most acute and where it was hoped that the radio programs would have the greatest effect. It was, therefore, obvious that several repeater stations would have to be installed if the country were to be covered. But this expense had not been foreseen, and at that time the capital requirements could not be met.

If I had known at the outset that no broadcast time was available and that the broadcast signal was so weak, there would have been little reason to carry out what planning was attempted. As it was, I submitted my completed report and left Country X.

I still don't know if I was deliberately kept away from the radio station or not. But several years later I did find out that nothing had been done with the plan I had proposed. I was not surprised since two major problems doomed this project from its beginnings:

1. The personnel of the Ministry of Education didn't know what they wanted or needed. While the concept of using radio broadcasting to meet some of Country X's educational needs was probably valid, no needs assessment, not even a bit of homework or a one-or-two-day visit by a consultant, provided sufficient foundation on which to build such a proposal. When I arrived, broadcasting and education officials were certainly not ready to bring in a consultant. Even if all of the groundwork had been laid, no consultant could have worked in a mere six weeks the miracle they were expecting.

2. There was obviously no real agreement or understanding between the Ministry of Education and the Broadcasting Corporation. The head of broadcasting may have been patronizing the Minister of Education or simply may not have known what was going on. If the Ministry of Education had had a better idea initially of how much and at what hours broadcast time would be required, cooperation might have been possible. At the very least, the broadcasting people should have admitted as soon as I arrived that a midday broadcast schedule struck them as out of the question.

Again, a brief visit or even a preliminary consultation by mail would have helped all involved with the project to establish certain boundaries, to clarify thinking, and to focus on questions that would have to be answered before more detailed planning could be considered. Without these first small steps, no "great leap forward" was possible. ■

Dilemmas in Country X: Candid discussions about failures

The following account of a failed development effort was submitted by a consultant who wishes to remain anonymous. In it, three tales unfold: (1) that of an international agency whose right hand does not know what its left hand is doing, (2) that of officials within a developing country who are only too willing to leave everything up to outsiders, and (3) that of bureaucratic conflicts of interest within the host country.

(The editor invites readers to submit reports for this column. Authors' names — as well as those of the people, agencies, and countries involved in the projects — will be withheld upon request.)

Seven years ago, the recruiting office of an international aid agency asked me to act as a consultant in educational radio broadcasting in a developing country. I accepted the offer, and after much waiting and several administrative misfires it was established that I was to stop at the agency's international headquarters to be briefed before proceeding to Country X.

I arrived at the agency's headquarters only to find that the person who was supposed to brief me was abroad and that no one else in that office knew anything about me or the project. I was asked to return in several hours. By the time I got back, a woman had been assigned to my case. Her way of handling me was to show me to the "library" and to install me there with copies of two annual reports from Country X. Without anything more in the way of briefing, I boarded my plane the next day.

A young man from the Ministry of Education met me at the airport and took me to a hotel, promising to return the next morning to pick me up. The following day I waited in vain for two hours for my one contact before taking a taxi to the international office of an agency cooperating with my sponsor. There I was greeted most cordially by the resident representative who then admitted, quite candidly, that he had no idea why I was there or what the mission was about. This cooperative official did, however, put me in touch with one of the agency's permanent staff members who was based in the Ministry of Education and who subsequently arranged a meeting with the Minister of Education for the next morning.

At that meeting were the Minister, his private secretary, several officials who dealt with curriculum development and supervision, and the head of the broadcasting corporation. The Minister began by explaining that Country X wished to establish a system of educational radio broadcasts to overcome some of the problems (shortage of space, lack of qualified teachers, poor facilities, etc.) that beleaguered the nation's primary schools.

The head of broadcasting voiced his support for the plan, and as the "visiting expert" I was asked for my views. In what I hoped was a very guarded statement, I then outlined some of the possibilities and problems that might be encountered, and I suggested some ways of beginning the planning . . . all of this after only the briefest introduction to the situation.

It soon became apparent that these officials' idea of planning differed wildly from mine. They were not envisioning a cooperative undertaking in which I assisted or advised. They wanted me to present them with a complete blueprint. While they were most helpful and willing to share whatever information they had (copies of the curricula, and so on), they simply did not wish to discuss details. All that was left up to me. I was the "expert."

It might be interesting to note here that the Education Ministry's staff included a Director of School Broadcasts. His interest lay, however, in the technical side — which in this case consisted of seeing that schools had functioning radios. Since there were no broadcasts for schools, his duties were few. Moreover, he showed no interest in the possibility that such broadcasts might be developed.

With certain misgivings, I agreed to draft an introductory plan for the broadcasting program. I reviewed the primary school curricula, sketched out tentative schemes for organizing series of courses, suggested timetables, listed the support materials that would be needed, noted equipment requirements, and stressed the need for training teachers to take advantage of the broadcasts.

During this time, I repeatedly asked if I could visit the radio station. I wanted to see the physical facilities and to discuss a few of the plan's technical aspects. Each time I was told that the head of broadcasting was not available and that it would not be proper for a person of my "status" to visit the station in his absence. Finally, when my tour was drawing to a close and the chief was still not available, protocol was relaxed: I was allowed to visit the station and to speak to the person who actually ran the operations.

The station, the only one in Country X, broadcast in the morning, afternoon, and evening but was shut down from mid-morning until mid-afternoon, the most useful period for the proposed plan. It would not, I was told, be possible for the station to allocate any broadcast time during these periods as they were reserved for maintenance. In spite of the support that the head of broadcasting had been expressing in our first meeting, it ap-

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Development Communication Report

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